



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,489	12/06/2001	Roger O. Williams	514542001000	3230
25226	7590	01/14/2004		
MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018				
			EXAMINER ALI, MOHAMMAD M	
			ART UNIT	PAPER NUMBER

3744

DATE MAILED: 01/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

0009

Office Action Summary	Application No. 10/006,489	Applicant(s) WILLIAMS ET AL.	
	Examiner Mohammad M Ali	Art Unit 3744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-65 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-18, 21, 25, 28, 32-37, 40-45, 47, 49-53, 55, 56 and 59-62 is/are rejected.
- 7) ☒ Claim(s) 5, 19, 20, 22-24, 26, 27, 29-31, 38, 39, 46, 48, 54, 57, 58, 63 and 64 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5, 7 and 8. 6) ☐ Other: .

Information Disclosure Statement

The information disclosure statement filed 6/25/03 having paper No 6 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4, 8-13, 15, 21, 25, 28, 32-33, 40, 59 and 65 are rejected under 35 U.S.C. 102(b) as being anticipated by Zeigler et al. (5,759,961). Zeigler et al. disclose an apparatus for producing flexible fiber comprising a throated structure having a nozzle 26 defined therethrough an entrance port 50 at a proximal end of the nozzle 26 and an exit port at a distal end of the nozzle 26, wherein the throated structure further defines at least one channel in fluid communication with the nozzle 26 for receiving a flow of fluid such that the trajectory of a droplet entering the entrance port 50 is alterable by the flow of fluid to a predetermined path 30 as the droplet passes through the exit port and

a droplet generator/crucible 12 for forming the droplet, being disposed proximally of the throated structure. See Fig 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 6-7, 14, 16-18, 35-36, 41-45, 61-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeigler et al. in view of Jolliffe (6,586,731). Zeigler et al. disclose the invention substantially as claimed as stated above. However, Zeigler et al. do not disclose vacuum pump, capillary tube, and voltage source. Jolliffe teaches the use of a vacuum pump 30b, voltage source 20/21 and a capillary tube 16 in a high intensity ion source producing droplet trajectory for the purpose of altering trajectory of droplet. See Fig. 6. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify the apparatus of Zeigler et al. in view of Jolliffe such that a vacuum pump, a capillary tube and a voltage source could be

provided in order to produce required droplet trajectory. Regarding claim 35 for choosing a glass slide for a target medium and claim 14 and 16-18 for choosing a shape of the cross-section of the nozzle are obvious choices of the individual skilled in the art since there is no criticality or unexpected result from it.

3. Claims 34 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeigler et al. in view of McDonnell et al. (3,864,692). Zeigler et al. disclose the invention substantially as claimed as stated above. However, Zeigler et al. do not disclose a planar target medium. McDonnell et al. teach the use of a planar target 66 in an ink jet printer producing droplet trajectory for the purpose of altering trajectory of droplet. See Fig. 3 and 7. McDonnell et al. also teach the use of third trajectory. See Fig. 3. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify the apparatus of Zeigler et al. in view of McDonnell et al. such that a planar target medium could be provided in order to produce required droplet trajectory with a planar target.

4. Claims 47, 49-53 and 55-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeigler et al. in view of Schultz et al. (6,633,031). Zeigler et al. disclose the invention substantially as claimed as stated above. However, Zeigler et al. do not disclose a plurality of nozzles with a plate having first and second surface. Schultz et al. teach the use of plurality of nozzles 110 with a plate having first and second surface producing droplet trajectory for the purpose of altering trajectory of droplet. See Fig. 3I and 4B. Schultz et al. also teach the use of well pate 154, wells and wells 152. See Fig. 5B. Therefore, it would have been obvious to one having an

Art Unit: 3744

ordinary skill in the art at the time the invention was made to modify the apparatus of Zeigler et al. in view of Schultz et al. such that a plurality of nozzles with plate having first and second surface could be provided in order to produce required droplet trajectory.

5. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zeigler et al. in view of Schultz et al. (6,633,031). Zeigler et al. disclose the invention substantially as claimed as stated above. However, Zeigler et al. do not disclose a well plate. Schultz et al. teach the use of a well plate 154 producing droplet trajectory for the purpose of altering trajectory of droplet. See Fig. 5B. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to modify the apparatus of Zeigler et al. in view of Schultz et al. such that a plurality of nozzles with plate having first and second surface could be provided in order to produce required droplet trajectory.

Allowable Subject Matter

6. Claims 5, 19-20, 22-24, 26-27, 29-31, 38-39, 46, 48, 54, 57-58 and 63-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier from the examiner should be directed to Mohammad M. Ali, whose telephone number is (703) 308-5032. The examiner can be reached from 6:10am to 4:50pm from Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Denise Esquivel, can be reached at (703) 308-2597. The fax number for the organization where this application or proceeding is assigned is 703-308-7764 for regular communications and after-final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

Wetzel
William E. Tapolcai
Primary Examiner
Art Unit 344

Ma

Ma

January 13, 2004